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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,962	12/05/2001	Werner Schafer	512425-2068	1833

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EXAMINER
LEE, RIP A

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/006,962	Applicant(s) SCHAFER ET AL.
	Examiner Rip A. Lee	Art Unit 1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-13 is/are rejected.

7)☒ Claim(s) 5,6,8 and 10 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on December 5, 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawing is objected to as failing to comply with 37 CFR 1.84(p)(5) because it includes reference sign **4** not mentioned in the description. A proposed drawing correction, corrected drawing, or amendment to the specification to add the reference signs in the description, is required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 5 is objected to because of the following informalities: The claim recites the terms, PMMA, PCAc, and PTFE, all of which are species of the corresponding genus polyacrylate, polyvinylacetate, and fluoropolymer. That is, poly(methyl methacrylate) is a type of polyacrylate, and not all polyacrylates are PMMA. Appropriate correction of the abbreviated forms of each of the recited polymers is required.

3. Claim 6 is objected to because of the following informalities: The claim states that the wetting agent or dispersant is selected from a specified Markush group of elements. It is not clear which component, the wetting agent or the dispersant, is to include the cited compounds. From the independent claim, it would appear that both wetting agent and dispersant are being described. Appropriate correction is required.

4. Claim 6 is also objected to because of the following informalities: The claim states that the wetting agent/dispersant is a mixture of "at least two of the foregoing." On one hand, based on the "or" terminology (see previous paragraph), said mixture of "at least two of the foregoing" reflects the fact that the composition contains a wetting agent *and* a dispersant selected from the recited group. Alternatively, the claim may be interpreted as having a wetting agent comprised of a mixture of at least two elements and a dispersant comprised of at least two elements, *i.e.*, there are four additives. Complete revision of the claim language is strongly suggested.

5. Claim 5 is objected to because of the following informalities: Remove the "and/or" language and use proper Markush group format to describe the types of carrier. See claim 6 for an example of Markush group language. Appropriate correction is required.

6. Claim 8 is objected to because of the following informalities: Change the word "obtainable" to "obtained." The word "obtainable" lends uncertainty to the claim because it is not clear whether the concentrate is actually made from the claimed process. Appropriate correction is required.

7. Claim 10 is objected to because of the following informalities: Use of "and/or" is inconsistent with the subject matter of the independent claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-3 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,554,217 to Bäbler.

overcome by application

The prior art of Bäbler relates to a process for preparing a stir-in pigment which is prepared from its aqueous presscake by spray drying or fluidized-bed drying (claim 1). The pigment composition may also contain a texture-improving agent such as a fatty acid ester, a fatty acid salt (*i.e.*, metal soap), and waxes. Although Bäbler does not indicate that more than one such texture-improving agent may be used, the skilled artisan would find it obvious to use combinations of materials to achieve the appropriate level of dispersion. Arriving at such a combination is well within the level of skill in the art, and it would not require undue experimentation. Furthermore, it would be obvious to the skilled artisan to use a combination of fatty acid ester and waxes in the invention of Bäbler because each member of the combination is

known individually to perform the same chemical function, and hence, the skilled artisan would have expected such a combination to work. *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *In re Lindner*, 173 USPQ 356, 359 (CCPA 1972).

According to the examples, the process takes place continuously, so one having skill in the art would also find it obvious to use the continuous process recited in claim 2. The pigment presscake contains pigment crude, therefore, pigments must have been added to the presscake initially, as required by the recitation of claim 3. Use of the materials listed in present claim 6 (*i.e.*, fatty acid ester, fatty acid salt, and waxes) is also obvious to the skilled artisan because they are disclosed adequately in the reference.

The resulting pigment particles were found to be bar-shaped, based on microscopy studies, and the particles appear to be uniform (0.5-2.7 μ; see Example 1A). Since there is no indication in the claim of what is meant by "form of beads" and what constitutes "uniform particle size," the subject matter of claim 8 is obvious in view of the reference. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In one particular example, the pigment presscake contained 35 % of pigment, and this lies within the range set forth in present claim 9. Therefore, it is obvious to use this amount because the reference teaches such an embodiment. It would be obvious to arrive at the subject matter of present claim 10 because Bäbler teaches the use of 0.05-20 wt % of texture-improving agent (col. 5, line 13). Use of the inventive pigment for coloring polymers is also obvious because

such a process is delineated in claim 1. As such, the skilled artisan would find it obvious to use the concentrate in this fashion, as stated in present claims 11-13.

overcome by amendment

11. Claims 1-3 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bäbler in view of U.S. Patent No. 5,880,193 to Berke *et al.*

Bäbler disclcoses to a process for preparing a stir-in pigment which is prepared from its aqueous presscake by spray drying or fluidized-bed drying (claim 1). The pigment composition may also contain a texture-improving agent such as a fatty acid ester, a fatty acid salt (*i.e.*, metal soap), and waxes. The reference is silent with respect to the identity of waxes that can be used for preparing pigment concentrates.

Berke *et al.* teaches the preparation of pigment concentrates for coloring resins whereby the pigment is uniformly dispersed with the aid of a dispersant containing polyolefin waxes (claim 1). The inventors elucidate further that polyolefin waxes include polyethylene wax and polypropylene wax. Thus, turning to Berke *et al.* for guidance, one having ordinary skill in the art would find it obvious to use polyolefin waxes in the process of Bäbler in order to arrive at the subject matter of the present claims. The combination of teachings is obvious because both relate to pigment concentrates.

Although Bäbler does not indicate that more than one such texture-improving agent may be used, the skilled artisan would find it obvious to use combinations of materials to achieve the appropriate level of dispersion. Arriving at such a combination is well within the level of skill in the art, and it would not require undue experimentation. Furthermore, it would be obvious to the

skilled artisan to use a combination of fatty acid ester and polyolefin waxes in the invention of Bäbler because each member of the combination is known individually to perform the same chemical function, and hence, the skilled artisan would have expected such a combination to work. *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *In re Lindner*, 173 USPQ 356, 359 (CCPA 1972).

The remaining reasons for rejections of claims 2, 3 and 6-13 from the previous paragraph is incorporated here by reference.

12. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/31507 to Wolbrink *et al.* in view of Bäbler.

Wolbrink *et al.* teaches a process of preparing a pigment concentrate by comminuting pigment in the presence of an aqueous emulsion of binder to form a stable suspension or paste. The suspension is then subjected to a spray drying treatment (claim 1). The binder is a polyester or polyurethane resin (claim 4). The formulation also contains dispersant in order to stabilize the suspension or paste (page 2, line 15). The process results in the formation of a concentrate containing 35-65 wt % of pigment and 4-10 wt % of dispersant (page 2, line 20). The invention also relates to use of the pigment concentrate for coloring thermoplastics or thermosetting plastics (page 4, lines 11-17). Wolbrink *et al.* teaches that suitable dispersants are surfactants having a HLB value of 10-18. And although the reference does not state that more than one surfactant can be used to achieve this, arriving at such a notion is obvious to one having ordinary skill in the art. Use of a combination of dispersant to achieve the correct HLB is well within the level of skill in the art, and it would not require undue experimentation.

Wolbrink *et al.* teaches use of spray drying, but it does not teach use of fluidized bed drying. However, Bäbler indicates that use of spray drying or fluidized-bed drying is equally suitable for drying pigment concentrates. Thus, the skilled artisan, having read both references, would find it obvious use fluidized bed drying with the expectation that such a method would achieve the same function.

Use of fatty acid esters and waxes as dispersant would be obvious to one skilled in the art, especially in light of the disclosure of Bäbler. Finally, there is no indication in the claim of what is meant by "form of beads" and what constitutes "uniform particle size," the subject matter of claim 8 is obvious in view of Wolbrink *et al.* (see claim 10). Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

13. The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure. The following references have been cited to show the state of the art concerning processes of making pigment concentrates.

U.S. 2002/0161083 to Schafer *et al.*
U.S. 2002/0098435 to Rohr et al.
U.S. Patent No. 6,365,648 to Couperus et al.
U.S. Patent No. 6,239,201 to Edelmann et al.
U.S. Patent No. 5,667,580 to Bäbler
U.S. Patent No. 5,455,288 to Needham
U.S. Patent No. 5,439,968 to Hyche
U.S. Patent No.4,244,863 to Hemmerich et al.

U.S. Patent No. 4,168,180 to Peabody
U.S. Patent No. 4,127,422 to Guzi et al.
U.S. Patent No. 3,755,244 to Hart

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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May 8, 2003

DAVID W. WU
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